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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,183	08/18/2006	Lars Ingvarsson	HT-127	4031

7590 04/16/2010
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EXAMINER

SULLIVAN, DEBRA M

ART UNIT	PAPER NUMBER
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3725

MAIL DATE	DELIVERY MODE
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04/16/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,183	Applicant(s) INGVARSSON, LARS	
	Examiner DEBRA M. SULLIVAN	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Ingvarsson et al (US Patent # 7,107,807) in view of Green et al (US Patent # 7,111,481). Ingvarsson et al discloses a method for forming, in a production line, profiles (See FIG 3) with a cross-section that varies along the length thereof, said profiles being formed from a plane metal strip (10) that is unwound from a coil (12), the method employing edge cutters (102, 103) and a plurality of roll-forming units (91-98), the edge cutter and the roll-forming units being individually displaceable sideways relative to the strip, the method comprising the steps of controlling the edge cutters along a first pair of opposed curved lines to sever opposed edges of the strip as the strip moves along the production line to provide the strip with curved opposed edges [see col. 5 lines 47-50], thereafter controlling the roll-forming units along a second pair of opposed curved lines for forming a first pair of corner (27, 28) defining opposed flanges to each side of the center of the metal strip (10) as the strip moves through a first roll-forming section of the production line and controlling the roll-forming units along a third pair of opposed curved lines for forming a second pair of corner (bottom corners of walls 25, 26) defining opposed sides to each side of the center of the metal strip (10) between the first corners (27, 28) as the strip moves through a second roll-forming section of the production line, wherein the curvatures of

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the first, second and third pairs of opposed curved lines vary the cross section of the profile formed from the strip along the length thereof [See col. 2 lines 33-39, col. 5 lines 25-42, col. 5 line 47-col. 6 lines 7; FIGS 3, 11 & 12]. Ingvarsson et al discloses the invention substantially as claimed except for wherein the second corner is formed after the first corner has been formed. However, Green et al teaches of forming profiles in a plane metal strip by forming a first corner 208b and then forming a second corner (210b) after the first corner (208b) has been formed in order to prevent stress and buckling on the walls while deforming the edges [see col. 5 line 36-col. 6 lines 8; FIG 3]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Ingvarsson et al to have the second corner formed after the first corner as been formed, as taught by Green et al, in order to prevent stress and buckling on the walls while deforming the edges.

In reference to claim 2, Ingvarsson et al further discloses including the step of cutting a transverse slit in the strip (10) before forming the first and second corners, without fully severing the strip (10) and severing the strip with a terminal cutter (63, 64) after the first and second corners are formed to remove a trailing end from the length of the profile formed from the strip (10) [See col. 4 lines 50-65].

In reference to claim 3, Ingvarsson et al further discloses that the length of the profile formed have different widths of extend at opposed ends of the profile, the steps of method including adjusting the width of the strip between one slit that defines the trailing end of the length of the one profile, cutting a further slit to define a leading end of the length of a subsequent profile and there after cutting the strip (10) at both slits with the terminal cutter (63, 64) [See col. 4 lines 50-65].

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2. Claims 4-8 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingvarsson et al in view of Green et al as applied to claim 1 above, and further in view of Schule (US 2004/0244453). Ingvarsson et al discloses the invention substantially as claimed except for wherein the method further comprises of thinning the profile. However, Schule teaches of a method for bending profiles by squeezing and stretching the material of a section in order to cause the material to bend and allowing the degree of bending to be adjusted quite accurately by varying the amount of force exerted [See paragraph 0009 and lines 11-18 of paragraph 0010]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the bending steps of Ingvarsson et al by allowing a force on the profile through the use of rollers to thereby thin the material and cause bending of the material, as taught by Schule, in order to obtain an accurate degree of bending.

Response to Arguments

Applicant's arguments filed January 21, 2010 have been fully considered but they are not persuasive. Applicant argues that neither Ingvarsson et al and Green et al teach or suggest the steps of forming two pairs of corners sequentially along two opposed pairs of curved lines for varying the cross section of the forming profile as a result of variations in the length of the formed opposed flanges and heights of the formed opposed side walls as a result of the curvatures of the first and second pairs of opposed curved lines.

The examiner respectfully disagrees. Ingvarsson et al discloses a method of forming profiles with a cross section that varies along the length (i.e. curved edges and varying radius of curvature, see col. 6 lines 4-6) wherein roll-forming units (91-94, 95-98) are individually adjusted such that the angle can be adjusted in relation to the longitudinal axis of the forming

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section and can also be moved in parallel transversely to the longitudinal axis. Therefore, it is inherent that the edge cutters are along a first curved line to cut the edges of the strip material to the desired curvature and the roll-forming section that form the first pair of corners are along a second curved line that is positioned further inward to the strip in order to contact the cut edges of the strip and deform them into the first pair of corners and the second roll-forming section that forms the second pair of corners are along a third curved line that is positioned further inward than the first roll-forming section in order to contact the strip material to form the second pair of corners, thereby forming a profile with a cross-section that varies along the length (i.e. curved).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Sullivan whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 10am - 8pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached at (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Debra M Sullivan/
Examiner, Art Unit 3725

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725